#### 综述

吡咯里西啶生物碱的细胞毒性及致毒机制研究进展

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摘要 吡咯里西啶生物碱广泛分布于6 000多种高等植物中,是一类肝毒性很强的天然产物。吡咯里西啶生物碱在肝脏代谢成活性代谢物吡咯后产生肝毒性。利用体外细胞毒性研究方法评价吡咯里西啶生物碱的毒性,对于阐明吡咯里西啶生物碱的致毒机制,研究开发拮抗其毒性的药物及保证临床用药安全具有重要意义。本文对吡咯里西啶生物碱的细胞毒性及致毒机制的研究进展进行综述。

关键词 吡咯里西啶生物碱; 细胞毒性

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# Advancement of investigation on cytotoxicity and mechanism of pyrrolizidine alkaloids

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#### Abstract

Pyrrolizidine alkaloids are a large class of natural products with hepatotoxicity and have been identified in more than 6 000 plant species. Pyrrolizidine alkaloids are activated by metabolic activation in liver and their parent compounds are converted into active "pyrrole" which may produce hepatotoxicity. It has important significance to evaluate the cytotoxicity of pyrrolizidine alkaloids in vitro for illuminating hepatotoxic mechanisms of pyrrolizidine alkaloids, finding drugs against the toxicity of pyrrolizidine alkaloids, and guaranteeing clinical medication security. In the present paper, the advancement of research on the cytotoxicity and mechanism of pyrrolizidine alkaloids are reviewed.

Key words pyrrolizidine alkaloids cytotoxicity

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